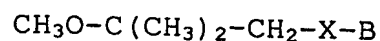


CLAIMS

1. A method of generating antibodies useful for
assaying a sample for fuel oxygenates comprising (i)
5 conjugating a hapten having a $\text{CH}_3\text{O}-\text{C}(\text{CH}_3)_2-\text{CH}_2$ -moiety to a
carrier protein to produce a conjugate; (ii) injecting
the conjugate into an animal; (iii) harvesting antibody-
synthesising cells from the animal; (iv) fusing the
antibody-synthesising cells with myeloma cells to form
10 hybridoma cells; (v) cultivating the hybridoma cells;
(vi) screening the cultivated cells to find desired cells
producing monoclonal antibodies capable of binding methyl
tert-butyl ether ("MTBE"); and (vii) cultivating said
desired cells and harvesting said monoclonal antibodies.

15

2. A method according to claim 1 wherein said
hapten is:

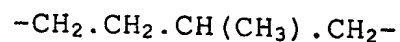


where X is a spacer and B is a group capable of
20 binding to a carrier protein.

3. A method according to claim 2 wherein the
spacer X comprises a hydrocarbon chain of 2-8 carbon
atoms.

25

4. A method according to claim 3 wherein the spacer X is:



5 5. A method according to claim 2, 3 or 4 wherein the binding group B is -CHO.

6. A method according to any preceding claim wherein the carrier protein is selected from bovine serum
10 albumin, human serum albumin, rabbit thyroglobin and keyhole limpet haemocyanin.

7. A method according to any preceding claim wherein the monoclonal antibodies exhibit binding to
15 methyl tert-butyl ether, ethyl tert-butyl ether, methyl tert-amyl ether and tert-butyl alcohol.

8. A monoclonal antibody capable of binding methyl
20 tert-butyl ether as produced by the method of any preceding claim.

9. A method of assaying a sample for fuel oxygenates and their breakdown products comprising generating antibodies by a method according to any of

claims 1-8 and carrying out an immunoassay using said antibodies.